AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application.

LISTING OF CLAIMS:

1. (Previously Presented) Device for sterilizing at least partly formed packages in a packaging machine, said device comprises an inner chamber and an outer chamber, the inner chamber being provided with a sterilization unit for sterilizing at least an inside of at least one partly formed package,

the device further comprises a carrier unit comprising at least one separating member and at least one package carrying member,

the carrier unit being adapted to rotate between a first position in which said at least one package carrying member is located in the outer chamber and adapted to return and receive at least one package, and in which said at least one separating member separates the inner chamber from the outer chamber, and a second position in which the carrier unit has rotated and displaced said at least one package into the inner chamber and in which said at least one separating member separates the inner chamber from the outer chamber, and

the device further comprises means for providing a relative motion between the package and the sterilizing unit for bringing them to a position in which the sterilizing unit is located at least partly in the package for treating it.

2. (Previously Presented) The device according to claim 1, wherein the inner and outer chambers form a housing, and the carrier unit is rotatably connected to said housing.

3. (Previously Presented) The device according to claim 1, wherein the relative motion between the package and the sterilizing unit involves the package moving towards the sterilizing unit to surround it.

4. (Previously Presented) The device according to claim 1, wherein the outer chamber is provided with a package opening for entrance and exit of packages to and from the device.

5. (Previously Presented) The device according to claim 1, wherein the separating member is substantially shaped as a plate, and the carrying member comprises two substantially disc-shaped members, both being perpendicularly arranged in relation to the separating member.

6. (Previously Presented) The device according to claim 5, wherein the disc-shaped members each being non-rotatably connected to a respective end portion of the separating member.

7. (Previously Presented) The device according to claim 5, wherein the two disc-shaped members are provided with at least one throughgoing opening each, the openings being aligned with each other.

8. (Previously Presented) The device according to claim 7, wherein the carrying member is provided with holding means being aligned with the openings.

9. (Previously Presented) The device according to claim 1, wherein the inner chamber comprises a first and a second chamber portion.

10. (Previously Presented) The device according to claim 9, wherein the sterilizing unit is located in said first chamber portion, and wherein the carrying member, in the second position, is located in said second chamber portion so that the openings in the carrying member are adapted to be aligned with the sterilizing unit, so that the package can be displaced to the position in which the sterilizing unit is located at least partly in the package for treating it.

11. (Previously Presented) The device according to claim 7 , wherein the inner and outer chambers form a housing provided with a package opening, and wherein the carrying member, in the first position, is adapted to be positioned so that the openings are aligned with the package opening in the housing, so that the package can enter and exit the device.

12. (Previously Presented) The device according to claim 4, wherein it is adapted to raise the package through the package opening and into the carrying member when the carrying member is in the first position, rotate the carrying member to the second position, raise the package to a position in which it at least partly surrounds the sterilizing unit, sterilize the package with the sterilizing unit, lower it back to the carrying member, rotate the carrying member back to the first

position, and lower the package out of the carrying member and out of the package opening.

13. (Previously Presented) The device according to claim 12, wherein it comprises first displacing means adapted to raise the package from the carrying member to a position in which the package at least partly surrounds the sterilizing unit and adapted to lower the package back to the carrying member.

14. (Previously Presented) The device according to claim 12, wherein it comprises second displacing means adapted to raise the package through the package opening and into the carrying member and adapted to lower the package out of the carrying member and out of the package opening.

15. (Previously Presented) The device according to claim 1 wherein the carrier unit comprises at least a first and a second carrying member, at least one at either side of the separating member, so that the first carrying member is adapted to rotate and displace a first package from the first position to the second position at the same time as the second carrying member is adapted to rotate and displace a second package from the second position to the first position.

16. (Previously Presented) The device according to claim 15, wherein the inner and outer chambers form a housing provided with a package opening, and wherein the device adapted to raise a first package through the package opening in the housing and into the first carrying member, the first carrying member being in the first position, and at the same time lower a second package from a position in which

it at least partly surrounds the sterilizing unit down to the second carrying member, the second carrying member being in the second position.

17. (Previously Presented) The device according to claim 15, wherein the inner and outer chambers form a housing provided with a package opening, and wherein the device adapted to lower a first package from the first carrying member out through the package opening in the housing, the first carrying member being in the first position, and at the same time raise a second package from the second carrying member, the second carrying member being in the second position, to a position in which the second package at least partly surrounds the sterilizing unit.

18. (Previously Presented) The device according to claim 1, wherein the sterilizing unit is an electron beam emitter.

19. (Previously Presented) The device according to claim 18, wherein the sterilizing unit comprises more than one electron beam emitter.

20. (Previously Presented) The device according to claim 1, wherein the carrying member is adapted to carry more than one package.

21. (Currently Amended) The device according to claim 1, wherein the inner chamber being provided with a gaseous fluid supply, the outer chamber being in connection with an outer housing via a package opening, the outer housing at least partly surrounding a package conveyor and being provided with a gaseous fluid outlet, said outlet being located in a portion of the outer housing that is being

arranged from the package opening in a direction opposite the direction of travel of the package conveyor,

the supply and the gaseous fluid outlet are adapted to create a flow of a gaseous fluid from the inner chamber, through the carrier unit, through the outer chamber, through the package opening in the housing to the outer housing, and through at least a portion of the outer housing ~~(24)~~ in a direction towards the gaseous fluid outlet.

22. (Previously Presented) The device according to claim 1, wherein the inner chamber is provided with a gaseous fluid outlet, the outer chamber is in connection with an outer housing via a package opening, the outer housing at least partly surrounding a package conveyor and being provided with gaseous fluid supplies, at least one of which is located in a portion of the outer housing that is being arranged from the package opening in a direction being the direction of travel of the package conveyor, and at least one of which being located in a portion of the outer housing that is being arranged from the package opening in a direction opposite the direction of travel of the package conveyor, the outlet and the gaseous fluid supplies are adapted to create a flow of a gaseous fluid towards the package opening in the housing, through the opening and into the outer chamber, through the carrier unit, and through the inner chamber to the gaseous fluid outlet.

23. (Currently Amended) Method for sterilizing at least partly formed packages in a packaging machine, the method comprising:

arranging a sterilizing unit in an inner chamber for sterilizing at least an inside of at least one package,

~~providing a carrier unit comprising at least one separating member and at least one package carrying member,~~

rotating a carrier unit, comprising at least one separating member and at least one package carrying member, between a first position in which said at least one package carrying member is located in an outer chamber and in which said at least one separating member separates the inner chamber from the outer chamber, and a second position in which the package carrying member is located in the inner chamber and in which the separating member separates the inner chamber from the outer chamber, and

providing a relative movement between the package and the sterilizing unit for bringing them to a position in which the sterilizing unit is located at least partly in the package for treating it.

24. (Previously Presented) Method according to claim 23, wherein it comprises:

raising the package through a package opening in a housing and into the carrying member when the carrying member is in the first position,

rotating the carrying member to the second position,

raising the package to a position in which it at least partly surrounds the sterilizing unit,

sterilizing the package with the sterilizing unit,

lowering it back to the carrying member,

rotating the carrying member back to the first position, and

lowering the package out of the carrying member and out of the package opening in the housing.

25. (Previously Presented) Method according to claim 23, wherein it comprises:

raising at least one first package through a package opening in a housing and into the first carrying member, the first carrying member being in the first position, and at the same time lowering a sterilized second package from a position in which it at least partly surrounds the sterilizing unit down to the second carrying member, the second carrying member being in the second position,

rotating the carrier unit so that the first carrying member with the first package is rotated from the first position to the second position at the same time as rotating the second carrying member with the second package from the second position to the first position,

lowering the sterilized second package from the second carrying member out through the package opening in the housing, and at the same time raising the first package from the first carrying member, being located inside the inner chamber, to a position in which the first package at least partly surrounds the sterilizing unit, and

sterilizing the first package.

26. (Previously Presented) Method according to claim 23, wherein the sterilizing unit is an electron beam emitter.

27. (Currently Amended) Method according to claim 23, comprising:

providing the inner chamber with a gaseous fluid supply,

providing the outer chamber in connection with an outer housing via a package opening, the outer housing at least partly surrounding a package conveyor

and being provided with a gaseous fluid outlet, said outlet being located in the portion of the outer housing ~~(24)~~ that is being arranged from the package opening in a direction opposite a direction of travel of the package conveyor,

creating a flow of the gaseous fluid from the inner chamber, through the outer chamber, through the package opening in the housing to the outer housing, and through at least a portion of the outer housing in a direction towards the gaseous fluid outlet.

28. (Currently Amended) Method according to claim 23, comprising:

providing the inner chamber with a gaseous fluid outlet,

providing the outer chamber in connection with an outer housing via a package opening, the outer housing at least partly surrounding a package conveyor and being provided with gaseous fluid supplies, at least one of which is located in a portion of the outer housing that is arranged from the package opening in a direction being a direction of travel of the package conveyor, and at least one of which is located in a portion of the outer housing that **[[**is**]]** is arranged from the package opening in a direction opposite the direction of travel of the package conveyor,

creating a flow of the gaseous fluid towards the package opening in the housing, through the opening and into the outer chamber, through the carrier unit, and through the inner chamber to the gaseous fluid outlet.